



NATIONAL RIVER LINKING PROJECT SIGNIFICANCE & CHALLENGES

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ABSTRACT

National River linking project (NRLP) is designed to transfer river water from water surplus portion to water deficit portion on the national level in terms of enhancing production in almost every aspect of economy i.e. To enhance agriculture production, production of electricity and to increase inland navigation facilities of transport. In India agriculture and farmers totally depends on the south-east and north-west monsoon causes by western disturbance and local cyclonic formation over regions. The un-parallel distribution of monsoon in India causes water deficiency in the southern land (Eastern Ghats) and at the same time abundance of water remains available in northern land causes several natural catastrophes i.e. flood. The design of national river linking project is created in the manner of degrading these several natural catastrophes and to transfer water which is scarce in nature and valuable commodity to human life in a parallel way. This paper presents the significance and challenges of national river linking project in the country.

KEYWORDS: National river linking, rivers, economy, agriculture, flood, monsoon.

Introduction

The national river linking project of India which is also called an inter-basin water transfer by National water development agency is designed to mitigate water deficiency in the western and southern part of the country while also decreasing the chances of recurring floods in the eastern parts, especially in Ganga basin. As per NWDA interlinking of rivers is one of the most effective ways to improve irrigation and agricultural production and minimize the various natural catastrophic situation like the flood, drought. The regional imbalance of river water causes a serious situation for farmers in the monsoon deficit area. By this river linking project water from all time flowing rivers to the seasonal rivers can easily be transferred through canals and regional imbalance can be reduced. The Brahmaputra and the Ganga and their northern tributaries and the west flowing rivers originating from the west are found to be water surplus.

Indian Rivers And Their left And Right Hand Tributaries:

Ganga	1. Gomti 2. Ghaghra 3. Gandak 4. Kosi 5. Yamuna 6. Son 7. Hoogly
Yamuna	1. Chambal 2. Sindh 3. Betwa 4. Ken 5. Tons 6. Hindon
Godavari	1. Indravati 2. Manjira 3. Bindusara 4. Sarbari 5. Penganga 6. Pranahita
Krishna	1. Tungabhadra 2. Ghataprabha 3. Malaprabha 4. Bhima 5. Vedavati 6. Koyna
Cauvery	1. Kabini 2. Hemavathi 3. Simsha 4. Arkavati 5. Bhavani
Narmada	1. Amaravati 2. Bhukhi 3. Tawa 4. Banger
Indus	1. Sutlej 2. Dras 3. Zaskar 4. Shyok 5. Gilgit 6. Suru
Brahmaputra	1. Dibang 2. Lohit 3. Jia Boreli (Kameng) 4. Dikhow 5. Subansiri 6. Manas
Damodar	1. Barakar 2. Konar
Ravi	1. Budhil 2. Nai or Dhona 3. Seul 4. Ujh
Mahanadi	1. Seonath 2. Hasdeo 3. Jonk 4. Mand 5. Ib 6. Ong 7. Tel
Chambal	1. Banas 2. Kali Sindh 3. Shipra 4. Parbati 5. Mej

Proposed Links Under River Linking Project:

Proposed Links	States	Proposed Links	States
Manas- Sankosh-Teesta-ganga	Assam, w. Bengal, Bihar	Mahanadi - Godavari	Odisha and Andhra Pradesh
Kosi - Ghagra	Bihar and Uttar Pradesh	Godavari - Krishna	Telangana
Gandak - Yamuna	Uttar Pradesh	Krishna - Pennar	Karnataka
Ghagra-yamuna	Uttar Pradesh	Pennar - Cauvery	Tamil Nadu
Yamuna - luni	Uttar Pradesh - Rajasthan	Ken - betwa	M.P & U.P
Sarda - yamuna	Uttar Pradesh	Cauvery - Gundar	Tamil Nadu

Proposed Links	Proposed Links	Proposed Links	Proposed Links
Luni - Sabarmati	Rajasthan - Gujarat	Parbati- kalisindh - Chambal	Rajasthan
Chunar - Sone barrage	Uttar Pradesh	Damanganga - pinjal	Gujarat - Maharashtra - daman and Diu and Dadar
Sone dam - southern tributaries of ganga	Uttar Pradesh	Bedthi - varada	
Farrakha-Sunderbans	Bihar and west Bengal	Netravati-hemavati	
Ganga - Damodare - subernarekha	Bihar, Jharkhand, w. bengal	Pamba-achankovil-vaiparu	
Koshi - Mechi	Bihar	Par-Tapi - Narmada	
Subernarekha - Mahanadi	Odisha	Krishna - pennar (somasila)	

NPP - National Perspective Plan:

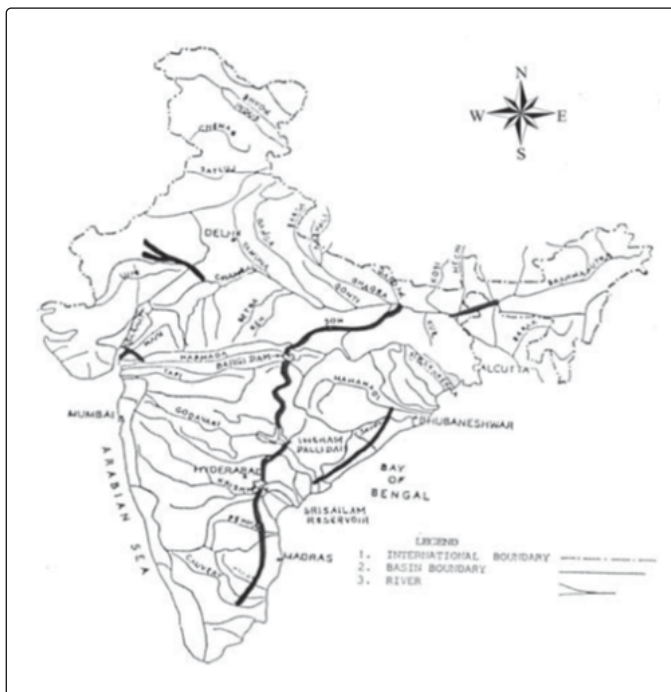
In the national perspective plan made by the ministry of water resources, 14 links under the Himalayan component and 16 links under peninsular components have been planned. As per NPP the Himalayan rivers foresees manufacturing of reservoirs on the main Ganga and Brahmaputra and their right and left flowing tributaries in India and nearby country Nepal, with an interlinking canal system to transfer surplus water from Ganga and its eastern tributaries to west. it will also link up Brahmaputra (main) with ganga l.

The economic aspect of NRLP:

As national river linking project is totally devoted towards the economic welfare of the country, it influences not only economic aspect of life but also commercial, social, cultural aspect of human life. the cost of this project seems to be around 5.6 lakh crore(estimated amount) and also creates some serious short of threats of displacement (not migration) i.e government will provide their shelters in exchange of the public cooperative attitude towards the project. As the cost of the project seems to be very high for the developing country like India. thus arranging funds nearly of 5.6 lakh crores is going to be a crucial aspect of this national river linking project.

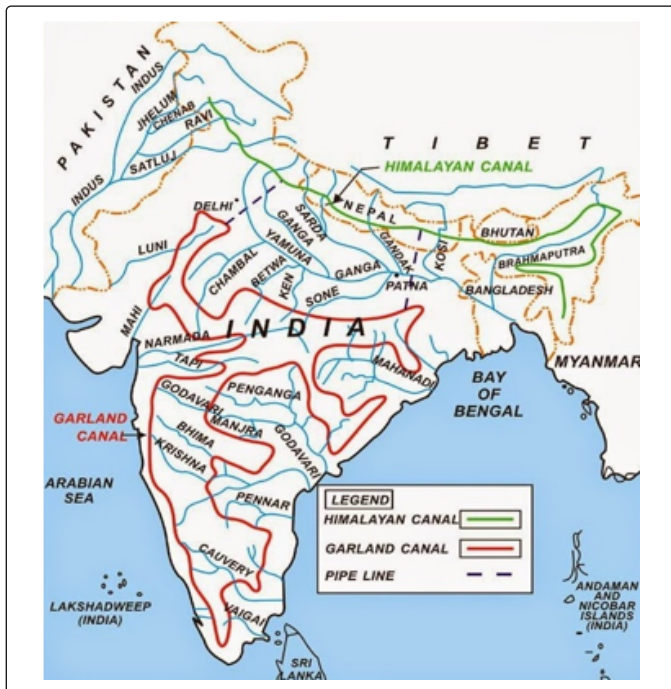
Historical Background:

The inking of national river linking project is not a new one. The impression can be traced back to the late 19th century when madras presidency engineer AURTHER COTTON introduce a plan to enhance inland navigation system in peninsular India. he early model of developing a national level water grid to supply water from the surplus area to water deficit area was introduced by Dr K.L RAO, the union minister in 1972.



K.L RAO's model:

The K.L Rao proposal was two-way plan i.e irrigation-cum- hydropower project which was to influence the Indian economy as a whole although it didn't have flood control merits included. under RAO's proposal the power need for upraising the water was between 5,000 to 7,000 Mw (approximately) and estimated area to be irrigated was around 4 million hectares demanded over 1,50,000 crores but that time due to deficit of funds in under threat economy (due to wars and natural disasters) that river linking project got only lip services as result central water commission rejected this plan on several grounds. The other proposal which gained the magnificent amount of attention was 'GARLAND CANAL' presented by captain dinshaw J. dastur in 1977.



CAP. C.D.J DASTUR MODEL:

Cap. dastur's model can be classified into two components.

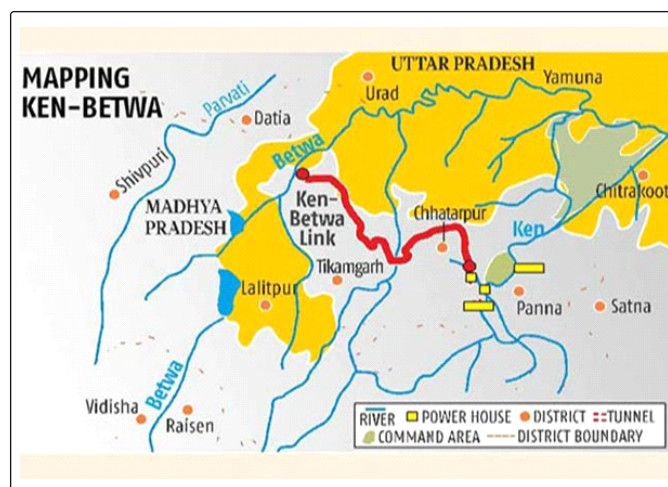
1. Himalayan canal formation of 4200 km through Himalayan rivers from Ravi in the west to the Brahmaputra in east
2. The garland canal of 9300 km connecting the southern and central part of India.

Before 2002 the river linking project was getting cold gesture from the government and the ministries but after 2002 it got all the possible boost when the hon'able president of India APJ Abdul Kalam clear a reference to solve out the

unparallel distribution of river water which causes drought in one part of country and flood in the other part .

This river linking project has been closed to the former prime minister of India BJP'S SHRI ATAL BIHARI VAJPAYEE as he gave a big push to this project in his tenure of office. In 2012 supreme court get their view clear on the national river linking project which they were denying on the cultural and social ground as a good idea for all time solution from flood and drought.

The present perspective and fresh initiatives regarding NRLP:- After dragging feet for so many years the river linking initiative got some serious boost now. The project which cost over \$87 billion is going to be the biggest project occurring on the national level. The work of some link has been initiated under the NRLP. Among them, ken betwa link plays a significant role in the transfer of river water. Ken – betwa link project: ken – betwa link which is one among 16 links under the peninsular component of national river linking project under the NATIONAL PERSPECTIVE PLAN. The plan for this link can be traced from 1995 when NWDA presented the idea of ken betwa link to the respective states i.e Madhya Pradesh and Uttar Pradesh . after dragging all the feet so long two states came to the consensus in 2005. The objective ken – betwa link is well defined that to transfer water from the surplus area of ken to the water deficit area of betwa. Though ken river basin founds to be water surplus. The ken-betwa link creates the threat to mass displacement and loss to forests but the links provide a warm opportunity towards better drainage system, inland navigation, power generation, flood control in respective regions.



Major states to benefit directly from NRLP:

Madhya Pradesh, Uttar Pradesh, Rajasthan, Kerala, Tamil Nadu, Gujarat, Bihar, Andhra Pradesh, Chattisgarh, Puducherry, Odisha, West Bengal, Telangana, Karnataka, Maharashtra are the major states which will get direct benefits of this national river linking project. When reservoirs will be made on the surplus river and will be connected in other parts of the country then the so-called regional imbalance could be diminished and inland navigation and irrigation pattern will enhance and farmers will not have to wait for a good monsoon.

Benefits of NRLP:

1. On its completion, the country will have more than 34GW of hydroelectric power.
2. The regional imbalance between lands will be minimised.
3. It will give the country's economy a major push
4. The effect of natural calamities like flood and drought occurs mainly due to an imbalance of water can be down

Hindrances/challenges in NRLP:

1. **Political Challenges:** Water is the sign of wealth for a state as its basic need of every kind thus a number of states do not want to go with national river linking project in fear of losing surplus of water to the other states. A less political desire will make this project again a lip service so for this issue there must be an enthusiasm towards the project only after this can be a dream project comes true.
2. **Economic Challenges:** National river linking project being a dream project for Indian government has a vast impact on the national economy as the programming cost of this project is very high nearly \$87 billion. It seems rather difficult to arrange this vast money from market itself.
3. **Environmental Challenges:** The national river linking project from very start has been a matter of criticism to environmentalist. they feel the project as negligent, incautious and impertinent. according to the major group of

environmentalist that project will change the geography of the whole country recklessly and will invite several challenges and worst effect of nature.

4. **International Challenges:** As the NRLP consist of Himalayan rivers like Ganga, the Brahmaputra which flows in either multination boundaries or bination boundaries. india's neighbours especially Bangladesh will resist this project because the flow of Ganga in Bangladesh will be reduced which will create a problem in implementing NRLP.

Paper methodology and objectives:

Paper is based on deep study of various secondary data. The main objective of the paper is to make a light on the project national river linking (NRLP) and its significance and challenges in the way ahead. This paper provides all the basic information about NATIONAL RIVER LINKING PROJECT IN INDIA.

Conclusive comment:

After being foot dragged for several decades the NRLP made it way .inspite of several questions put by environmentalist, geologist, and experts the problem of the country should a matter of paramount. almost every year country wears the loss of lives, assets, infrastructure due to flood, drought and all these natural catastrophes. The NRLP may provide a long-term solution towards this serious issue of regional imbalance of water and can make Indian farmers for monsoon free farming. The success of INDRA GANDHI CANAL and SARDAR SAROVAR YOJANA should be considered. There a certain issue of displacement and to environment, that should be given chief consideration throughout this valuable NRLP.

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